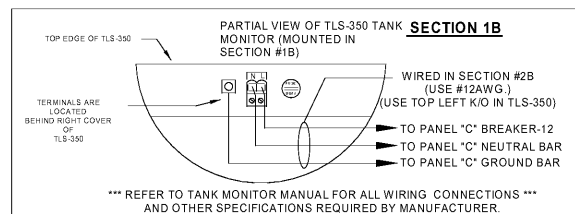


ISSUE/REVISION RECORD	DATE	DESCRIPTION
01/25/19	PERMIT SET	
03/16/20	REFRESH TO 2020.01.13	

STANDARD PLAN BULLETINS (SPB) MODIFY THE PROTOTYPE SERIES SET NOTED ABOVE. THE LISTED SPB REPRESENTS THE LATEST MODIFICATION INCORPORATED TO THIS PROTOTYPE SERIES SET AT ORIGINAL RELEASE. THE ISSUE/REVISION RECORD COLUMN ABOVE LISTS ANY REVISIONS OR SPB INCORPORATED IN THIS SET AFTER THE ORIGINAL RELEASE. CONTACT RACETRAC ENGINEERING AND CONSTRUCTION FOR ANY SUBSEQUENT BULLETINS NOT INCORPORATED HEREIN.

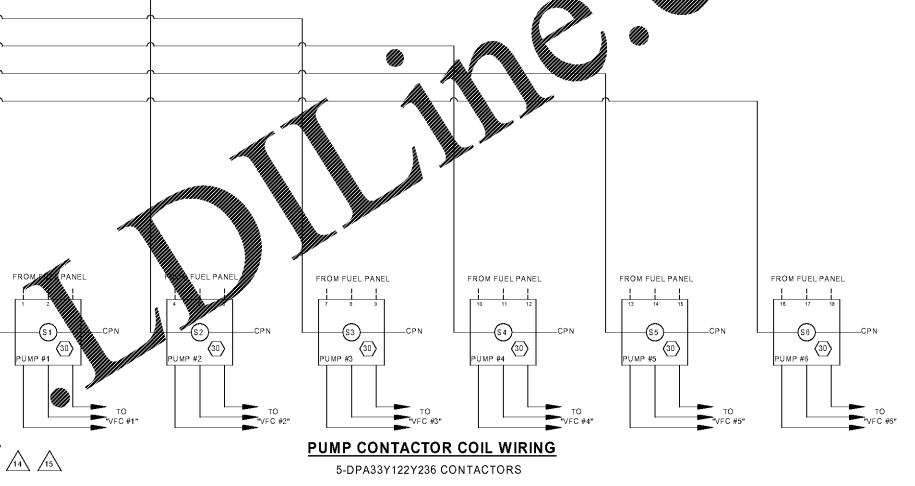
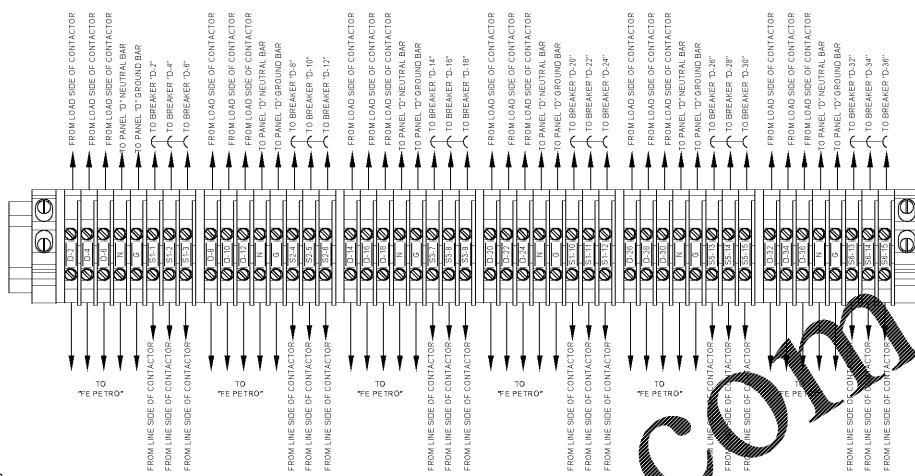
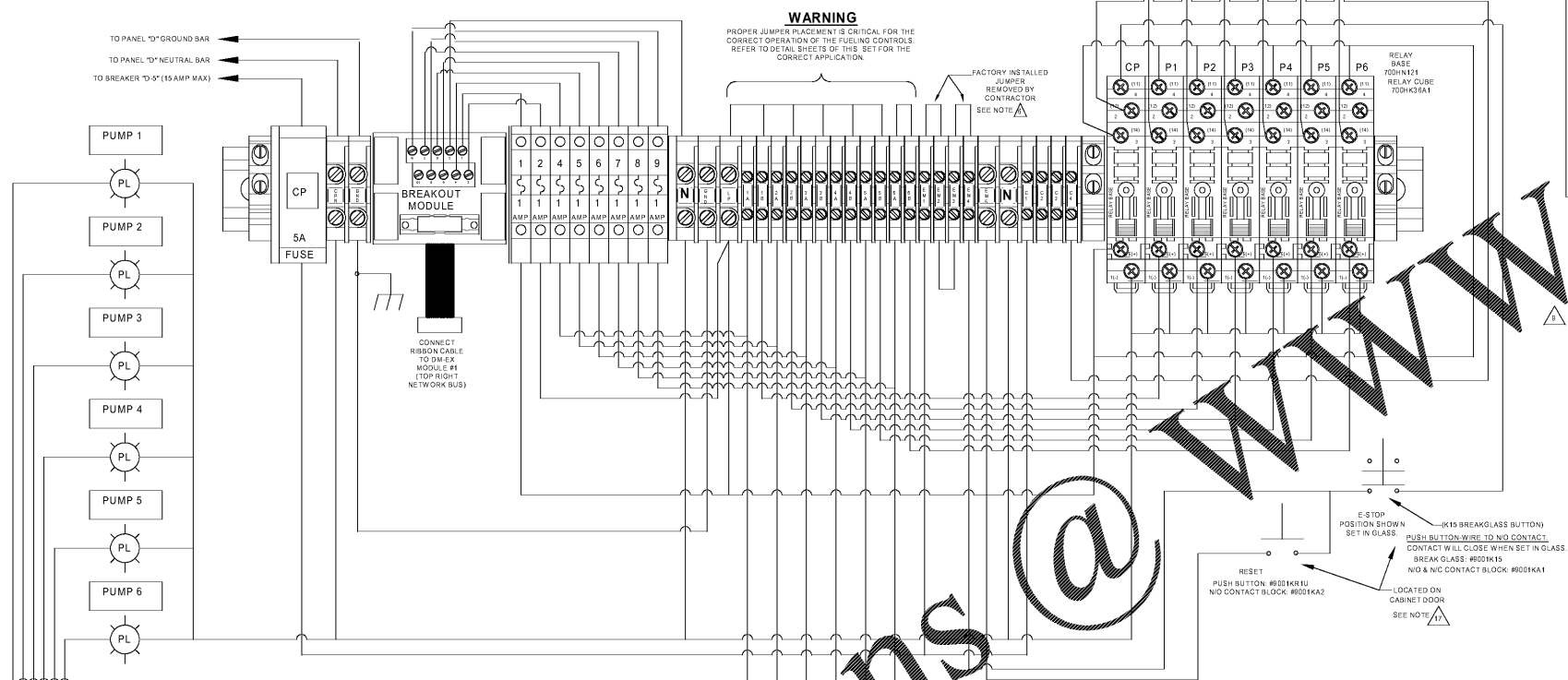


**TANK MONITOR/PUMP SHUTDOWN OPTION WITH CONVENTIONAL SUBMERSIBLE PUMPS**

- WHEN INDIVIDUAL SHUTDOWN OF DISPENSERS THRU THE TANK MONITOR IS REQUIRED REMOVE THE FACTORY INSTALLED "REMOTE OFF" JUMPERS FROM THE DM-EX MODULES. CONNECT THESE TERMINALS TO RELAY OUTPUT MODULE AS SHOWN. THIS WILL ALLOW THE TANK MONITOR TO SHUTDOWN ANY DISPENSER THROUGH THE RELAY OUTPUT MODULE.
- REFER TO TANK MONITOR MANUAL FOR ALL WIRING CONNECTIONS AND OTHER SPECIFICATIONS REQUIRED BY MANUFACTURER.
- THE TANK MONITOR IS TYPICALLY MOUNTED OUTSIDE THE POWERBOX ENCLOSURE ON AN ADJACENT WALL.
- THE TANK MONITOR SHOWN IS FOR A TYPICAL "PUMP SHUTDOWN" RELAY BOARD ONLY. FOR "LINE PRESSURE" SYSTEM DETAIL SHEETS.
- THIS DETAIL IS TO ILLUSTRATE WIRING OF (1) CONVENTIONAL PUMP.
- THE TERMINAL STRIP SHOWN IS FOR THE STANDARD DM-EX DESIGN. THE STANDARD DM-EX DESIGN MAY BE CUSTOMIZED FOR ADDITIONAL PUMP DEVICES, THERE BY ALTERING THE STANDARD DESIGN SHOWN. PLEASE REFER TO ALL INFORMATION TO DETERMINE THE NUMBER OF DEVICES FOR EACH JOB LOCATION.

**DISPENSER FIELD WIRING NOTES:**

- WIRING IS TYPICAL OF ALL DISPENSERS. GROUND CONDUCTOR (#12 AWG) MUST ALSO BE RUN FROM EACH DISPENSER TO THE GROUND BAR OF THE DISPENSER/PUMP CONTROL PANEL.
- DISPENSER "A/C" (POWER) AND "D/C" (DATA) TYPICALLY RUN IN SEPARATE CONDUITS, OR PER DISPENSER MANUFACTURER REQUIREMENTS.
- SEE DISPENSER INSTALLATION DIAGRAMS FOR TERMINATION LABELING.
- ALL FIELD WIRING TERMINALS MUST BE WIRED WITH A MINIMUM INSULATION RATING OF 60°C.
- FACTORY INSTALLED "REMOTE OFF" JUMPERS ON DM-EX MODULES MUST REMAIN IN PLACE DURING NORMAL OPERATION. REMOVING THIS JUMPER AND WIRING INTO A "PAN SENSOR" SYSTEM PROVIDES INDIVIDUAL SHUTDOWN OF EACH DISPENSER.
- THE WIRE SIZE AND NUMBER OF CONDUCTORS REQUIRED FOR COMMUNICATION DATA (D/C) WIRING MUST BE DETERMINED BY THE SPECIFICATIONS OF THE DISPENSER MANUFACTURER. TYPICALLY 2 CONDUCTORS (NORMALLY SHIELDED CABLE) ARE REQUIRED WHEN CARD READERS IN THE DISPENSER ARE USED.



**DISPENSER DM-EX MODULE CHART**

DISPENSER NUMBER	BREAKER DESCRIPTION	EQUIPMENT	NUMBER	VOLTAGE	AMPS	CIRCUIT INFO	
						PNL	CKT. #
DM-EX #6	DISPENSER	8		120 V	20.0 A	D	21
DM-EX #7	DISPENSER	7		120 V	20.0 A	D	19
DM-EX #6	DISPENSER	6		120 V	20.0 A	D	17
DM-EX #5	DISPENSER	5		120 V	20.0 A	D	15
DM-EX #4	DISPENSER	4		120 V	20.0 A	D	13
DM-EX #3	DISPENSER	3		120 V	20.0 A	D	11
DM-EX #2	DISPENSER	2		120 V	20.0 A	D	9
DM-EX #1	DISPENSER	1		120 V	20.0 A	D	7
DM-EX #1	DISPENSER	1		120 V	20.0 A	D	7

**SUBMERSIBLE PUMP EQUIPMENT SCHEDULE**

EQUIPMENT	VOLTAGE	CONTACTOR NUMBER	AMPS	CIRCUIT INFO		OUT PUT
				PNL	CKT.	
STP-1 (REGULAR) ST-1	208 V	1	VERIFY	D	2.46	S1
STP-2 (DIESEL)	208 V	2	VERIFY	D	8.10.12	S4
STP-3 (PREMIUM)	208 V	3	VERIFY	D	14.16.18	S3
STP-4 (E85)	208 V	4	VERIFY	D	20.22.24	S5
STP-5 (REGULAR)	208 V	5	VERIFY	D	26.28.30	S2
STP-6 (E85)	208 V	6	VERIFY	D	32.34.36	S6
(EDO) STP-2	208 V	5	VERIFY	D	37.39.41	S2
(EDO) STP-1	208 V	6	VERIFY	D	31.33.35	S6

**GENERAL NOTES FOR DISPENSER/PUMP CONTROLS:**

- BEFORE STARTING THE ASSEMBLY PROCESS PLEASE READ ALL NOTES.
- ALL FIELD WIRING TERMINALS MUST BE WIRED WITH A MINIMUM INSULATION RATING OF 60°C IF CIRCUIT IS RATED LESS THAN 100 AMPS. OR A MINIMUM INSULATION RATING OF 75°C IF CIRCUIT IS RATED OVER 100 AMPS.
- WHEN CONTROLLED LOAD IS A MOTOR, CIRCUITS MUST HAVE THERMAL PROTECTION INTERNAL TO MOTOR OR PROVIDED BY OTHERS.
- THIS DRAWING CONTAINS ALL THE FACTORY WIRING REQUIRED TO ASSEMBLE THESE CONTROLS. FOR A COMPLETE EXAMPLE OF ALL FIELD WIRING TO THESE CONTROLS PLEASE SEE THE DETAILS DRAWING IN THIS SET.
- THE WIRE GAUGE USED TO ASSEMBLE THESE CONTROLS VARIES THROUGHOUT. TO DETERMINE WIRE SIZE THAT SHOULD BE USED PLEASE CHECK THE AMPERAGE OF THE CIRCUIT CONTROLLING THESE COMPONENTS. THE AMPERAGE CAN BE OBTAINED FROM THE PANELBOARD SCHEDULES DRAWING LOCATED IN THIS SET.
- IF THERE ARE ANY QUESTIONS ABOUT THE PLACEMENT OF ANY NON-STANDARD DEVICES THE DISPENSER/PUMP CONTROLS SCREEN PLEASE CONTACT THE DRAWING DEPARTMENT TO DETERMINE PROPER PLACEMENT.
- WHEN THE EQUIPMENT IS FACTORY INSTALLED, THE EQUIPMENT SHOULD BE MOUNTED TO THE CONTROL'S SECTION WHEN MOUNTED OUTSIDE OF THE CONTROL'S SECTION.
- THE DISPENSER CONTROL WIRING SHOWN ON THIS DRAWING IS FOR ONE DISPENSER. ALTHOUGH THE NUMBER OF DISPENSERS USED FOR EACH JOB MAY VARY THE WIRING SHOWN IS TYPICAL OF ALL DISPENSERS.
- THE PILOT LIGHTS SHOWN ON THIS DRAWING ARE TO VISUALLY VERIFY THE OPERATION OF EACH PUMP. ALL PILOT LIGHTS SHOWN SHOULD BE MOUNTED ON THE DOOR OF THE DISPENSER/PUMP CONTROLS SECTION.
- THE MOMENTARY SWITCHES FOR "FUEL SHUTDOWN" AND "FUEL RESET" SHOWN ON THIS DRAWING SHOULD BE MOUNTED ON THE DOOR OF THE DISPENSER/PUMP CONTROLS SECTION.

